

Draft: Integration of Habitat Actions to Address Process, Function & Structure in North Lake Washington Tributaries - Tier 1 Subareas

Process: Forests, wetlands, floodplains, and riparian buffers provide critical hydrologic processes that temper high flows, flashiness, and erosion; maintain base flows; protect water quality and water temperature.

Functions Provided
Water quality
Water quantity
Habitat

Land Use: Protect forest cover, minimize increases in impervious surfaces and road crossings through incentives and regulations (including stormwater and critical areas ordinances); encourage low impact development.

Site-Specific Actions: Purchase property or easements to protect parcels that include forests, floodplains, and riparian buffers.

Public Education: Promote public awareness of alternatives to impervious materials and effect of impervious surfaces on water quality and water quantity.

Process: Headwater areas, wetlands, and sources of groundwater (e.g., seeps and springs) maintain temperature and hydrologic integrity.

Functions Provided: Water quality
Water quantity

Land Use: Protect or restore headwater areas such as Cold Creek Natural area, forest cover, wetlands, and groundwater sources through incentives and regulations to provide long-term protection and improvements.

Site-Specific Actions: Acquire land or conservation easements to protect key areas that contribute to basin-wide water quality and hydrologic integrity.

Public Education: Increase public awareness of importance of these key areas in salmon production throughout subwatershed.

Process: Natural sediment recruitment, storage, and transport processes support spawning gravel deposition and maintenance, as well as processes that support pool and riffle creation.

Functions Provided: Water quality

Land Use: Adopt stormwater management practices that reduce sediment inputs from bed-scouring high flows, and from non-point sources, including sand on roads and farm practices.

Site-Specific Actions: Construct LWD jams at strategic locations to reduce erosion. Plant native riparian vegetation to restore riparian corridor and increase bank stability.

Public Education: Promote understanding of link between fine sediments, metals (particularly those in household items), and water quality for salmon.

Process: Spawning areas in Bear Creek are a significant source of productivity and abundance for the North Lake Washington Chinook population and should be protected.

Functions Provided: Water quality
Water quantity
Habitat

Land Use: Continue to enforce 65/10 provisions, and aquatic buffers.

Site-Specific Actions: Acquire land or conservation easements to protect spawning areas, particularly in Upper Bear and Cottage Lake Creek.

Public Education: Promote water conservation and reduced residential chemical uses to increase public awareness of linkages between home water use, stormwater run-off, and stream conditions.

Process: Adequate stream flows allow upstream migration and spawning.

Functions Provided: Water quantity

Land Use: Provide long-term protection of adequate flows by addressing impact of water withdrawals (illegal, legal, exempt) on flows.

Site-Specific Actions: Remove channel constrictions that limit groundwater interactions and hydrologic connectivity.

Public Education: Promote awareness of the need for year-round water conservation in order to keep water in streams.

Process: Channel connectivity (e.g., off-channel habitat) and complexity (e.g., large woody debris) contributes to channel stability and development of pools. Large woody debris also traps sediments, increases channel stability, and reduces water temperature.

Functions Provided: Water Quality
Habitat

Land Use: Maintain and effectively enforce current aquatic-area buffers to restore the long-term natural sources of LWD.

Site-Specific Actions: Construct LWD jams at strategic locations to address lack of natural LWD sources. Plant native riparian vegetation to restore riparian corridor.

Public Education: Promote understanding of link between trees today and fish habitat tomorrow.

This graphic illustrates representative sample of actions. It does not include all proposed actions.

Green: denotes adjacent land use and public education actions in the immediate vicinity of water or key habitats (e.g., wetlands) where regulations/incentives coupled with public education can protect or restore water quality or quantity, and habitat conditions. In the short- and long-term, land use actions in these areas have a major effect on aquatic habitat conditions and the processes that create and maintain that habitat.

Blue: denotes areas along water bodies where site-specific actions are proposed to protect or restore specific stream reaches. Such actions may protect or restore habitat functions, or address symptoms of degraded habitat functions, and are supported by land use and public education actions that protect habitat processes and functions throughout the watershed.

Gray: denotes areas where broader land use and public education actions are proposed throughout the watershed. Responsible land stewardship and low impact development protect and maintain natural flow regimes and water quality.

Examples of Site-Specific Project Recommendations

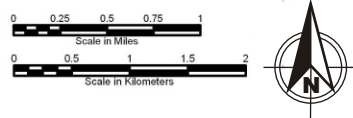
Restoration By Reach

- Add LWD as Opportunities Arise
- Restore, Replant Riparian Vegetation

Protection By Reach

- Reforest Cleared Areas
- Protect Riparian Habitat Through Acquisition
- Protect Headwaters and Springs
- Protect Large/Public Parcel of Land

- UGA Urban Growth Boundary
- Water Body
- Wetland
- Study Reaches (EDT)
- Merged Buffer



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